AN OPTICAL MONITOR AND A METHOD FOR IMPROVED OPTICAL MONITORING

ABSTRACT OF THE DISCLOSURE

The inventor proposes herein a novel optical monitor requiring only a single fiber-coupled photodetector. In one embodiment of the present invention, the optical monitor further includes an optical coupler for tapping a portion of an optical signal, a tunable filter for filtering the tapped optical signal at a predetermined frequency, and a Faraday rotator mirror for removing any polarization dependence of the tapped optical signal and for reflecting the filtered optical signal back through the tunable filter and the coupler. Subsequently, the photodetector of the optical monitor measures the power of the filtered optical signal. The optical spectrum of the optical signal is thus measured by scanning the tunable filter across the band of the optical signal and measuring the power of the optical signal as a function of the optical frequency of the tunable filter.